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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,661	03/15/2001	Eric R. Alling	50823	5747
21874	7590	10/18/2006		
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			EXAMINER SINES, BRIAN J	
			ART UNIT	PAPER NUMBER
			1743	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/809,661

Applicant(s)

ALLING ET AL.

Examiner

Brian J. Sines

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/7/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-15, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-15, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 11 – 15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurley et al. (U.S. Pat. No. 5,368,715 A) (hereinafter “Hurley”).

Regarding claims 11 – 18, Hurley teaches the a methodology for monitoring and controlling the operation of a plating bath process (see col. 2, line 40 – col. 9, line 31). Hurley teaches the use of efficiency meters during operation (see, e.g., col. 2, lines 65 – 67). Hurley teaches the use of corrective adjustments for the process due to process drift (see, e.g., 4, lines 4 – 64). Hurley teaches continuous monitoring and control (see, e.g., col. 3, lines 26 – 40). Hurley teaches the monitoring of the operation of the various types of equipment (e.g., the plating bath, valves, pump flow rates replenisher concentrations, etc.) (see, e.g., col. 3, lines 5 – 40; col. 4, lines 4 – 56). Hurley teaches generating an operation analysis of the equipment (e.g., the use of

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diagnostic screens) (see, e.g., col. 4, lines 26 – 56). The operation analysis can include plating rate and replenishment flow rate (see, e.g., col. 4, lines 26 – 42; col. 8, lines 59 – 66). Hurley teaches that the equipment can be monitored to determine if the equipment is operating efficiently based on the operations analysis using predetermined specifications (e.g., set points and control/tolerance limits) via the use of the diagnostic screens and an efficiency sensor. The process equipment can be adjusted accordingly if the process is not operating efficiently (see, e.g., col. 4, lines 4 – 64).

Hurley teaches that the output of the various sensors for various process parameters, such as the efficiency sensor, the autotitrator, the temperature sensor, the liquid volume sensor and the pH sensor allow for "feed-backward" control of the composition of the plating bath. For example, if the predictive model for drag-out is slightly inaccurate, the plating bath will tend to drift out of control. Input from the feed-backward side of the expert control system according to the present invention allows the predicted replenisher additions to be modified to compensate for minor inaccuracies in the predictive model or for other factors such as contamination, operator error or the like (see col. 4, lines 4 – 16). The CPU compares the sensor signals against set points determined by the predictive model and control/tolerance limits set by the operator. If the values exceed the control/tolerance limits, the system can (1) recommend additional replenisher additions; (2) recommend postponing upcoming feed-forward additions for a determined period of ampere-time; and/or (3) assist the user in bringing the bath parameters back into their desired ranges via diagnostic screens (see col. 17 – 25).

Hurley does not explicitly teach the maintaining of a log of previous settings or set points for various parameters for operating the process equipment as claimed. Hurley does teach the

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use of previous settings or set points of various process parameters during operation (see, e.g., col. 4, lines 44 – 55). Hurley does teach that different types of plating processes can be performed using the disclosed methodology (see, e.g., col. 3, lines 26 – 56). Therefore, it would have been obvious to a person of ordinary skill in the art to maintain a log of previous settings or set points for the various parameters for operating different plating processes using the process equipment as claimed.

With respect to claims 13 and 17, Hurley does teach the use of a computer (CPU 10) for monitoring and controlling the disclosed process (see, e.g., col. 3, lines 58 – 60). The use of computer internet connections in industrial and chemical plant operation are well known in the art. The use of an internet connection would enable the remote monitoring and control of the disclosed process from another location. Therefore, it would have been obvious to a person of ordinary skill in the art to remotely monitor and control the disclosed process as claimed.

Response to Arguments

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines whose telephone number is (571) 272-1263. The examiner can normally be reached on Monday - Friday (11 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Brian J. Sines". The signature is stylized with a large loop at the end of the last name.